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AUTHORITY: Secs. 2(f)(1)(D), (q)(1)(A), (s), 3(e)(1), 74 Stat. 372, 374, 375, as amended, 80 Stat. 1304–05, 83 Stat. 187–89 (15 U.S.C. 1261, 1262); Pub. L. 107–319, 116 Stat. 2776.

SOURCE: 43 FR 60034, Dec. 22, 1978, unless otherwise noted.

Subpart A—Regulations

§ 1512.1 Scope.

This part sets forth the requirements for a bicycle as defined in §1512.2(a) (except a bicycle that is a ''track bicycle'' or a ''one-of-a-kind bicycle'' as defined in §1512.2 (d) and (e)) which is not a banned article under §1500.18(a)(12) of this chapter.

§ 1512.2 Definitions.

For the purposes of this part:

(a) Bicycle means:

(1) A two-wheeled vehicle having a rear drive wheel that is solely human-powered;

(2) A two- or three-wheeled vehicle with fully operable pedals and an electric motor of less than 750 watts (1 h.p.), whose maximum speed on a paved level surface, when powered solely by such a motor while ridden by an operator who weighs 170 pounds, is less than 20 mph.

(b) *Sidewalk bicycle* means a bicycle with a seat height of no more than 635 mm (25.0 in); the seat height is measured with the seat adjusted to its highest position. Recumbent bicycles are not included in this definition.

(c) *Seat height* means the dimension from the point on the seat surface intersected by the seat post center line (or the center of the seating area if no seat post exists) and the ground plane, as measured with the wheels aligned and in a plane normal to the ground plane.

(d) *Track bicycle* means a bicycle designed and intended for sale as a competitive velodrome machine having no brake levers or calipers, single crank-to-wheel ratio, and no free-wheeling feature between the rear wheel and the crank.

(e) *One-of-a-kind bicycle* means a bicycle that is uniquely constructed to the order of an individual consumer other than by assembly of stock or production parts.

(f) *Normal riding position* means that the rider is seated on the bicycle with both feet on the pedals and both hands on the handlegrips (and in a position that allows operation of handbrake levers if so equipped); the seat and handlebars may be adjusted to positions judged by the rider to be comfortable.

(g) *Recumbent bicycle* means a bicycle in which the rider sits in a reclined position with the feet extended forward to the pedals.

[43 FR 60034, Dec. 22, 1978, as amended at 68 FR 7073, Feb. 12, 2003; 76 FR 27888, May 13, 2011]

§ 1512.3 Requirements in general.

Any bicycle subject to the regulations in this part shall meet the requirements of this part in the condition to which it is offered for sale to consumers; any bicycle offered for sale to consumers in disassembled or partially assembled condition shall meet these requirements after assembly according to the manufacturer's instructions. For the purpose of compliance with this part, where the metric and English units are not equal due to the conversion process the less stringent requirement will prevail.

§ 1512.4 Mechanical requirements.

(a) *Assembly*. Bicycles shall be manufactured such that mechanical skills required of the consumer for assembly shall not exceed those possessed by an adult of normal intelligence and ability.

(b) *Sharp edges.* There shall be no unfinished sheared metal edges or other sharp parts on assembled bicycles that are, or may be, exposed to hands or legs; sheared metal edges that are not rolled shall be finished so as to remove any feathering of edges, or any burrs or spurs caused during the shearing process.

(c) *Integrity.* There shall be no visible fracture of the frame or of any steering, wheel, pedal, crank, or brake system component resulting from testing in accordance with: The handbrake loading and performance test, §1512.18(d); the foot brake force and performance test, §1512.18(e); and the road test, §1512.18(p) (or the sidewalk bicycle proof test, §1512.18(q)).

(d) *Attachment hardware.* All screws, bolts, or nuts used to attach or secure components shall not fracture, loosen, or otherwise fail their intended function during the tests required in this part. All threaded hardware shall be of sufficient quality to allow adjustments and maintenance. Recommended quality thread form is specified in Handbook H28, ''Screw Thread Standards for Federal Service,'' [1] issued by the National Bureau of Standards, Department of Commerce; recommended mechanical properties are specified in ISO Recommendation R898, ''Mechanical Properties of Fasteners,'' and in ISO Recommendations 68, 262, and 263, ''General Purpose Screw Threads.'' [2]

(e)–(f) [Reserved]

(g) *Excluded area.* There shall be no protrusions located within the area bounded by (1) a line 89 mm (3½ in) to the rear of and parallel to the handlebar stem; (2) a line tangent to the front tip of the seat and intersecting the seat mast at the top rear stay; (3) the top surface of the top tube; and (4) a line connecting the front of the seat (when adjusted to its highest position) to the junction where the handlebar is attached to the handlebar stem. The top tube on a female bicycle model shall be the seat mast and the down tube or tubes that are nearest the rider in the normal riding position. Control cables no greater than 6.4 mm (¼ in) in diameter and cable clamps made from material not thicker than 4.8 mm (3⁄16 in) may be attached to the top tube.

(h) [Reserved]

(i) *Control cable ends.* Ends of all accessible control cables shall be provided with protective caps or otherwise treated to prevent unraveling. Protective caps shall be tested in accordance with the protective cap and end-mounted devices test, §1512.18(c), and shall withstand a pull of 8.9 N (2.0 lbf).

(j) *Control cable abrasion.* Control cables shall not abrade over fixed parts and shall enter and exit cable sheaths in a direction in line with the sheath entrance and exit so as to prevent abrading.

[43 FR 60034, Dec. 22, 1978, as amended at 76 FR 27888, May 13, 2011]

§ 1512.5 Requirements for braking system.

(a) *Braking system.* Bicycles shall be equipped with front- and rear-wheel brakes or rear-wheel brakes only.

(b) *Handbrakes.* Handbrakes shall be tested at least ten times by applying a force sufficient to cause the handlever to contact the handlebar, or a maximum of 445 N (100 lbf), in accordance with the loading test, §1512.18(d)(2), and shall be rocked back and forth with the weight of a 68.1 kg (150 lb) rider on the seat with the same handbrake force applied in accordance with the rocking test, §1512.18(d)(2)(iii); there shall be no visible fractures, failures, movement of clamps, or misalignment of brake components.

(1) *Stopping distance.* A bicycle equipped with only handbrakes shall be tested for stopping distance by a rider of at least 68.1 kg (150 lb) weight in accordance with the performance test, §1512.18(d)(2) (v) and (vi), and shall have a stopping distance of no greater than 4.57 m (15 ft) from the actual test speed as determined by the equivalent ground speed specified in §1512.18(d)(2)(vi).

(2) *Hand lever access.* Hand lever mechanisms shall be located on the handlebars in a position that is readily accessible to the rider when in a normal riding position.

[1] Copies may be obtained from: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

[2] Copies may be obtained from: American National Standards Institute, 1430 Broadway, New York, New York 10018.